This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A video circuit for processing video signals which show images on a display panel with linear light transition, comprising

a gamma correction circuit,

a quantizer,

first and second random access memories, and

a sub-field generator circuit,

wherein the gamma correction circuit provides an m-bit corrected video signal, wherein a coarse adjustment of the quantization is made in ~~a~~ the first random-access memory addressed by the m-bit corrected video signal to provide an n-bit coarse quantization adjustment and a quantization error for the coarse quantization adjustment, and

further wherein a fine adjustment of the quantization is made in ~~a~~ the second random-access memory addressed by the m-bit corrected video signal that has been modified by the quantization error for the coarse quantization adjustment to provide an n-bit fine quantization adjustment, wherein m > n, and

further wherein multiple quantization errors of different neighboring pixels of a current pixel are used to generate an n-bit pixel value to be displayed on the display panel, wherein the pixel value to be displayed and the multiple quantization errors of the different neighboring pixels satisfy:

$$PVTBD = rounded\ (X_{(x,y)} + CV + a \times QE(X_{(x-1,y-1)}) + b \times QE(X_{(x,y-1)})$$

$$+ c \times QE(X_{(x+1,y-1)}) + d \times QE(X_{(x-1,y)}),$$

where *PVTBD* represents the pixel value to be displayed, rounded() represents a rounding function, CV represents a constant value to perform the rounding function, *X(x,y)* represents the current pixel that is located in column x and line y of an image, *QE(X(x-1,y-1))* represents quantization error of a

neighboring pixel that is located in column x-1 and line y-1 of the image, *QE(X(x,y-1))* represents quantization error of a neighboring pixel that is located in column x and line y-1 of the image, *QE(X(x+1, y-1))* represents quantization error of a neighboring pixel that is located in column x+1 and line y-1 of the image, *QE(X(x-1,y))* represents quantization error of a neighboring pixel that is located in column x-1 and line y of the image, and *a, b, c and d* represent multiplier coefficients for *QE(X(x-1,y-1))*, *QE(X(x,y-1))*, *QE(X(x+1,y-1))* and *QE(X(x-1,y))*, respectively.

2. (currently amended) A video circuit for processing video signals which display images on a display panel with linear light transition, comprising

a gamma correction circuit,

a quantizer,

first and second random access memories, and

a sub-field generation circuit,

wherein most significant bits are quantized in ~~a~~ the first random-access memory addressed using the most significant bits and wherein the first random-access memory provides a quantization error for the quantized most significant bits, and

further wherein least significant bits that have been adjusted by the quantization error for the quantified most significant bits are quantized in ~~a~~ the second random-access memory addressed using the adjusted least significant bits, wherein the first random-access memory is physically separate from the second random-access memory.

3. (currently amended) A video circuit for processing video signals which show images on a display panel with linear light transition, comprising

a gamma correction means,

a quantization means, and

a sub-field generation means,

wherein the quantization means is a random-access memory, and the gamma correction means provides gamma-corrected values that have been converted with non-equidistant values, and

further wherein multiple quantization errors of different neighboring pixels of a current pixel are used to generate a pixel value to be displayed on the display panel, wherein the pixel value to be displayed and the multiple quantization errors of the different neighboring pixels satisfy:

$$PVTBD = rounded\ (X_{(x,y)} + CV + a \times QE(X_{(x-1,y-1)}) + b \times QE(X_{(x,y-1)}) + c \times QE(X_{(x+1,y-1)}) + d \times QE(X_{(x-1,y)})),$$

where *PVTBD* represents the pixel value to be displayed, rounded() represents a rounding function, CV represents a constant value to perform the rounding function, $X(x,y)$ represents the current pixel that is located in column x and line y of an image, $QE(X(x-1,y-1))$ represents quantization error of a neighboring pixel that is located in column x-1 and line y-1 of the image, $QE(X(x,y-1))$ represents quantization error of a neighboring pixel that is located in column x and line y-1 of the image, $QE(X(x+1,y-1))$ represents quantization error of a neighboring pixel that is located in column x+1 and line y-1 of the image, $QE(X(x-1,y))$ represents quantization error of a neighboring pixel that is located in column x-1 and line y of the image, and *a, b, c and d* represent multiplier coefficients for $QE(X(x-1,y-1))$, $QE(X(x,y-1))$, $QE(X(x+1,y-1))$ and $QE(X(x-1,y))$, respectively.

4. (previously presented) A video circuit as claimed in claim 3, wherein the random-access memory additionally performs dequantization.

5. (previously presented) A video circuit as claimed in claim 3 wherein the random-access memory is said gamma correction means.

6. (previously presented) A video circuit as claimed in claim 4, wherein an inverse gamma circuit is arranged downstream of the random-access memory.

7. (previously presented) A video circuit as claimed in claim 3, wherein the random-access memory is said sub-field generating means.

8. (previously presented) A video circuit as claimed in claim 7, wherein sub-field generation values are applied to a filter via a conversion means and a dequantization means.

9. (previously presented) A video circuit as claimed in claim 8, wherein the filter applies values to an adder which is situated in an input area of a second signal which represents pixel values of a neighboring line.

10. (previously presented) A video circuit as claimed in claim 9, wherein sub-field generation values are applied to the adder via a second conversion means and a second dequantization means.

11. (previously presented) A video circuit as claimed in claim 9, wherein pixel values of the neighboring line are quantized in a quantization means and sub-fields are generated in a further sub-field generation means wherein a further second random-access memory is said further quantization means and said further sub-field generation means.

12. (canceled)

13. (previously amended) A video circuit as claimed in claim 1 further comprising:

a filter configured to process the multiple quantization errors of the different neighboring pixels of the current pixel to generate a processing result, wherein the filter comprises multiplier elements, adders and serially connected delay elements; and

an adder configured to combine the processing result with the current pixel to generate a combined result.

14. (previously amended) A video circuit as claimed in claim 2 further comprising:

a filter configured to process multiple quantization errors of different neighboring pixels of a current pixel to generate a processing result, wherein the filter comprises multiplier elements, adders and serially connected delay elements; and

an adder configured to combine the processing result with the current pixel to generate a combined result.

15. (previously amended) A video circuit as claimed in claim 3 further comprising:

a filter configured to process the multiple quantization errors of the different neighboring pixels of the current pixel to generate a processing result, wherein the filter comprises multiplier elements, adders and serially connected delay elements; and

an adder configured to combine the processing result with the current pixel to generate a combined result.

16. (previously amended) A video circuit as claimed in claim 13 further comprising memory configured to store the constant value, wherein the adder is further configured to add the processing result, the constant value and the current pixel to generate the combined result.

17. (previously amended) A video circuit as claimed in claim 1, wherein the constant value is 1/2.

18. (previously amended) A video circuit as claimed in claim 13 further comprising a rounding circuit coupled to the adder and the quantizer, wherein the rounding circuit is configured to perform the rounding function on the combined result to generate a rounded result.

19. (previously amended) A video circuit as claimed in claim 2, wherein multiple quantization errors of different neighboring pixels of a current pixel are

used to generate a pixel value to be displayed on the display panel, wherein the pixel value to be displayed and the multiple quantization errors of the different neighboring pixels satisfy:

$$PVTBD = rounded\,(X_{(x,y)} + CV + a \times QE(X_{(x-1,y-1)}) + b \times QE(X_{(x,y-1)})$$

$$+ c \times QE(X_{(x+1,y-1)}) + d \times QE(X_{(x-1,y)}),$$

where *PVTBD* represents the pixel value to be displayed, round() represents a rounding function, CV represents a constant value to perform the rounding function, *X(x,y)* represents the current pixel that is located in column x and line y of an image, *QE(X(x-1,y-1))* represents quantization error of a neighboring pixel that is located in column x-1 and line y-1 of the image, *QE(X(x,y-1))* represents quantization error of a neighboring pixel that is located in column x and line y-1 of the image, *QE(X(x+1,y-1))* represents quantization error of a neighboring pixel that is located in column x+1 and line y-1 of the image, *QE(X(x-1,y))* represents quantization error of a neighboring pixel that is located in column x-1 and line y of the image, and *a, b, c and d* represent multiplier coefficients for *QE(X(x-1,y-1))*, *QE(X(x,y-1))*, *QE(X(x+1,y-1))* and *QE(X(x-1,y))*, respectively.

20. (previously amended) A video circuit as claimed in claim 3, wherein the constant value is 1/2.